



December, 2021

Volume 4, Issue 2

## Floodplain Management Staff:

Karen McHugh, CFM  
State NFIP Coordinator  
(573) 526-9129  
karen.mchugh@sema.dps.mo.gov

Linda Olsen, CFM  
Advanced Emergency Management Officer  
(573) 526-9115  
linda.olsen@sema.dps.mo.gov

Lynn Welch, CFM  
Floodplain Management Officer  
(573) 526-9135  
lynn.welch@sema.dps.mo.gov

Roger Connell, CFM  
Misc. Professional/part-time  
(573) 526-9169  
roger.connell@sema.dps.mo.gov

### Inside this issue:

Floodplain Development Permit/Application	2
Floodplain Development Permit/Application	3
Floodplain Development Permit/Application Fictitious Situation	4
Floodplain Development Permit/Application	5
CFM Exam Reflections	
NFIP Contacts	6
2022 ASFPM National Conference	6



## State Emergency Management Agency (SEMA) Floodplain Management Section

### Issue 2 - FY 2021 - Floodplain Management E-Bulletin

It's the second quarter of Fiscal Year 2021 and time for the second FY21 *Missouri Floodplain Management E-Bulletin*! The entire Floodplain Management staff at the Missouri State Emergency Management Agency has been very busy this quarter working to help our Missouri communities each and every day.

Now that COVID-19 travel restrictions are relaxing, we are beginning to get back out for "in person" visits and trainings! This is very meaningful for the State Floodplain Management Section; it enables us to better serve our NFIP communities to the very best of our ability!

We're always looking for flooding photos, elevated structure photos, projects demonstrating stormwater management techniques, "green" projects, and floodplain management-related events, so please share them with us! Be sure to include your name, the location, and the date of the photo. Send photos to: karen.mchugh@sema.dps.mo.gov



***We are wishing you all the best in this coming holiday season!***

***Have a wonderful New Year!***

**From the State Emergency Management Agency's Floodplain Management Section!**



Linda Olsen

Lynn Welch

Karen McHugh

## **Floodplain Development Permit/Application**

A big THANK YOU to our National Flood Insurance Program (NFIP)-participating communities that do such an excellent job regulating development in flood hazard areas, identified on Flood Insurance Rate Maps (FIRMs) in Special Flood Hazard Areas (SFHAs). As a reminder, SFHAs are defined as the area that will be inundated by the flood event having a 1-percent chance of being equaled or exceeded in any given year. The 1-percent annual chance flood is also referred to as the base flood or the 100-year flood. On Missouri FIRMs, SFHAs can be labeled as Zone A, Zone AO, Zone AH, Zones A1-A30, Zone AE, Zone A99, or Zone AR. If you want to Keep It Simple (KIS), just remember that any zone beginning with an "A" is where NFIP-participating communities must regulate development.

It is one of the State Floodplain Management Section's responsibilities to provide technical and specialized assistance to Missouri NFIP-participating communities. With this in mind, the next few pages of this issue of the *Missouri Floodplain Management E-Bulletin* are devoted to helping NFIP communities with permit requirements. Because state floodplain staff has noticed a pattern of noncompliance with permitting in many NFIP-participating communities, we will do our best to keep this guidance in keeping with the "KIS" principle, with the goal of helping community floodplain administrators to better understand the importance of approving or denying Floodplain Development Permits for ALL development in the SFHA.

Let's begin with the NFIP definition of "development" found in [Title 44 CFR 59.1](#): "Development means any man-made change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials."



Continuing with the KIS principle, a floodplain development permit shall be required for all proposed construction or other development, including the placement of manufactured homes, in the areas identified as A, AO, AH, A1-30, AE, A99 and AR Zones on the Flood Insurance Rate Maps (FIRMs) for the community. In other words, no development shall be permitted except through the issuance of a Floodplain Development Permit, granted by the community's floodplain administrator.



The Floodplain Development Permit on the following page was developed by the Missouri Floodplain Management Section. It can be used as is, or modified to fit the community's permit process. Regardless, some type of Floodplain Management Permit **MUST** be issued for ALL development in the 1% annual chance (aka 100-year) floodplain. Follow this [link](#) for a fillable Floodplain Development Permit.

**Floodplain Development Permit/Application (continued)**

The State's sample Floodplain Development Permit is divided into three sections: The Owner/Developer Section, the Site Elevation Section and The Community Approval Section.

**FLOODPLAIN DEVELOPMENT PERMIT/APPLICATION**

Application No. \_\_\_\_\_ Date: \_\_\_\_\_

TO THE ADMINISTRATOR: The undersigned hereby makes application for a permit to develop in a floodplain. The work to be performed, including flood protection works, is as described below and in attachments hereto. The undersigned agrees that all such work shall be in accordance with the requirements of the Floodplain Management Ordinance and with all other applicable county/city ordinances, federal programs, and the laws and regulations of the State of Missouri.

Owner or Agent _____	Date _____	Builder _____	Date _____
Address _____		Address _____	
Phone _____		Phone _____	

Owner/  
Developer  
Section

**SITE DATA**

- Location: \_\_\_\_\_ 1/4; \_\_\_\_\_ 1/4; Section \_\_\_\_\_; Township \_\_\_\_\_; Range \_\_\_\_\_  
Street Address \_\_\_\_\_
- Type of Development: Filling \_\_\_\_\_ Grading \_\_\_\_\_ Excavation \_\_\_\_\_ Minimum Improvement \_\_\_\_\_  
Routine Maintenance \_\_\_\_\_ Substantial Improvement \_\_\_\_\_ New Construction \_\_\_\_\_ Other \_\_\_\_\_
- Description of Development: \_\_\_\_\_
- Premises: Structure Size \_\_\_\_\_ ft. By \_\_\_\_\_ ft. Area of Site \_\_\_\_\_ Sq Ft  
Principal Use \_\_\_\_\_ Accessory Uses (storage, parking, etc.) \_\_\_\_\_
- Value of Improvement (fair market) \$ \_\_\_\_\_ Pre-Improvement/Assessed Value of Structure \$ \_\_\_\_\_
- Property Located in a Designated FLOODWAY? Yes \_\_\_\_\_ No \_\_\_\_\_

Site/Elevation  
Section

**IF ANSWERED YES, CERTIFICATION MUST BE PROVIDED PRIOR TO THE ISSUANCE OF A PERMIT TO DEVELOP, THAT THE PROPOSED DEVELOPMENT WILL RESULT IN NO INCREASE IN THE BASE (100-YEAR) FLOOD ELEVATIONS.**

- Property Located in a Designated Floodplain FRINGE? Yes \_\_\_\_\_ No \_\_\_\_\_
- Elevation of the 100-Year Flood (ID source) \_\_\_\_\_ NGVD/NAVD
- Elevation of the Proposed Development Site \_\_\_\_\_ NGVD/NAVD
- Local Ordinance Elevation/Floodproofing Requirement \_\_\_\_\_ NGVD/NAVD
- Other Floodplain Elevation Information (ID and describe source) \_\_\_\_\_
- Other Permits Required?
 

Corps of Engineer 404 Permit:	Yes _____	No _____	Provided _____
State Department of Natural Resources 401 Permit:	Yes _____	No _____	Provided _____
Environmental Protection Agency NPDES Permit:	Yes _____	No _____	Provided _____

All Provisions of Ordinance Number \_\_\_\_\_, the "Floodplain Management Ordinance", shall be in Compliance.

**PERMIT APPROVAL/DENIAL**

Plans and Specifications Approved/Denied this \_\_\_\_\_ Day of \_\_\_\_\_, 20 \_\_\_\_\_

Signature of Developer/Owner _____	Authorizing Official _____
Print Name and Title _____	Print Name and Title _____

Community  
Approval  
Section

THIS PERMIT IS ISSUED WITH THE CONDITION THAT THE LOWEST FLOOR (INCLUDING BASEMENT FLOOR) OF ANY NEW OR SUBSTANTIALLY IMPROVED RESIDENTIAL BUILDING WILL BE ELEVATED \_\_\_\_\_ FOOT/FEET ABOVE THE BASE FLOOD ELEVATION. IF THE PROPOSED DEVELOPMENT IS A NON-RESIDENTIAL BUILDING, THIS PERMIT IS ISSUED WITH THE CONDITION THAT THE LOWEST FLOOR (INCLUDING BASEMENT) OF A NEW OR SUBSTANTIALLY IMPROVED NON-RESIDENTIAL BUILDING WILL BE ELEVATED OR FLOODPROOFED \_\_\_\_\_ FOOT/FEET ABOVE THE BASE FLOOD ELEVATION.

THIS PERMIT IS USED WITH THE CONDITION THAT THE DEVELOPER/OWNER WILL PROVIDE CERTIFICATION BY A REGISTERED ENGINEER, ARCHITECT, OR LAND SURVEYOR OF THE "AS-BUILT" LOWEST FLOOR (INCLUDING BASEMENT) ELEVATION OF ANY NEW OR SUBSTANTIALLY IMPROVED BUILDING COVERED BY THIS PERMIT.

(MISSOURI)  
October 3, 2018



## Completed Floodplain Development Permit /Application—Fictitious situation

The State Floodplain Management Section's staff often receive requests for a completed "sample" Floodplain Development Permit. Copied below is a fictional development to be used for training purposes only:

**FLOODPLAIN DEVELOPMENT PERMIT/APPLICATION**

Application No. Carthage FPDP 2021-021 Date: August 25, 2021

TO THE ADMINISTRATOR: The undersigned hereby makes application for a permit to develop in a floodplain. The work to be performed, including flood protection works, is as described below and in attachments hereto. The undersigned agrees that all such work shall be in accordance with the requirements of the Floodplain Management Ordinance and with all other applicable county/city ordinances, federal programs, and the laws and regulations of the State of Missouri.

Mr. Quincy Magoo 8/23/2021 Custom Homes of SW Missouri 8/23/2021  
 Owner or Agent Date Builder Date  
 100 Chestnut Lane, Carthage, Missouri 123 Home Builders Avenue, Carthage Missouri  
 Address Address  
 (123) 456-7890 (987) 654-3210  
 Phone Phone

**SITE DATA**

1. Location: SW 1/4; SW 1/4; Section 4; Township 28N; Range 31W  
 Street Address: 1800 Poplar Street Sugarbakers Addition E1/2 Lots 53 & 54 Block 53

2. Type of Development: Filling \_\_\_\_\_ Grading X Excavation \_\_\_\_\_ Minimum Improvement \_\_\_\_\_  
 Routine Maintenance \_\_\_\_\_ Substantial Improvement \_\_\_\_\_ New Construction X Other \_\_\_\_\_

3. Description of Development: Construction of a single family residence with associated grading of the lot.  
Structure will be elevated on a crawlspace foundation.

4. Premises: Structure Size 52' ft. By 60' ft. Area of Site 100' x 240' 24,000 Sq Ft  
 Principal Use Residential Accessory Uses (storage, parking, etc.) N/A

5. Value of Improvement (fair market) \$ 192,000 Pre-Improvement/Assessed Value of Structure \$ N/A

6. Property Located in a Designated FLOODWAY? Yes \_\_\_\_\_ No X

IF ANSWERED YES, CERTIFICATION MUST BE PROVIDED PRIOR TO THE ISSUANCE OF A PERMIT TO DEVELOP, THAT THE PROPOSED DEVELOPMENT WILL RESULT IN NO INCREASE IN THE BASE (100-YEAR) FLOOD ELEVATIONS.

7. Property Located in a Designated Floodplain FRINGE? Yes X No \_\_\_\_\_

8. Elevation of the 100-Year Flood (ID source) 981.4 Using the Community's Flood Insurance Profile ~~NGVD/NAVD~~

9. Elevation of the Proposed Development Site Lowest Floor of the Crawlspace: 979.5' Next Higher Floor: 983.4' ~~NGVD/NAVD~~

10. Local Ordinance Elevation/Floodproofing Requirement 982.4' ~~NGVD/NAVD~~

11. Other Floodplain Elevation Information (ID and describe source) FIRM Panel No. 29097C187D dated March 16, 2006  
Flood Insurance Study Profile for City Branch 20-P and 21P dated March 16, 2006

12. Other Permits Required? Corps of Engineer 404 Permit: Yes \_\_\_\_\_ No X Provided \_\_\_\_\_  
 State Department of Natural Resources 401 Permit: Yes \_\_\_\_\_ No X Provided \_\_\_\_\_  
 Environmental Protection Agency NPDES Permit: Yes \_\_\_\_\_ No X Provided \_\_\_\_\_

All Provisions of Ordinance Number 2020-005, the "Floodplain Management Ordinance", shall be in Compliance.

**PERMIT APPROVAL/DENIAL**

Plans and Specifications Approved Denied this 2nd Day of September, 20 21  
Mr. Quincy Magoo Karen L. McHugh, CFM  
 Signature of Developer/Owner Authorizing Official  
Mr. Quincy Magoo, Owner Karen L. McHugh, Floodplain Administrator  
 Print Name and Title Print Name and Title

THIS PERMIT IS ISSUED WITH THE CONDITION THAT THE LOWEST FLOOR (INCLUDING BASEMENT FLOOR) OF ANY NEW OR SUBSTANTIALLY IMPROVED RESIDENTIAL BUILDING WILL BE ELEVATED One (1) FOOT/FEET ABOVE THE BASE FLOOD ELEVATION. IF THE PROPOSED DEVELOPMENT IS A NON-RESIDENTIAL BUILDING, THIS PERMIT IS ISSUED WITH THE CONDITION THAT THE LOWEST FLOOR (INCLUDING BASEMENT) OF A NEW OR SUBSTANTIALLY IMPROVED NON-RESIDENTIAL BUILDING WILL BE ELEVATED OR FLOODPROOFED One (1) FOOT/FEET ABOVE THE BASE FLOOD ELEVATION.

THIS PERMIT IS USED WITH THE CONDITION THAT THE DEVELOPER/OWNER WILL PROVIDE CERTIFICATION BY A REGISTERED ENGINEER, ARCHITECT, OR LAND SURVEYOR OF THE "AS-BUILT" LOWEST FLOOR (INCLUDING BASEMENT) ELEVATION OF ANY NEW OR SUBSTANTIALLY IMPROVED BUILDING COVERED BY THIS PERMIT.

(MISSOURI)  
October 3, 2018

While reviewing the completed Floodplain Development Permit, make sure that there are no lines left blank. If the question doesn't apply, N/A should be written, otherwise it is assumed that the question was not answered. If the project meets the requirements of the community's ordinance, approve the Floodplain Development Permit. If the project does not meet the requirements of the community's ordinance, deny the permit.

### **Floodplain Development Permit/Application (continued)**

Remember to have on-file approved Floodplain Development Permits for Public Assistance or Individual Assistance projects after a Presidential Disaster Declaration, for SEMA/FEMA Mitigation Projects, and for Community Development Block Grant Projects. Even if the project is for demolition of a structure, a Floodplain Development Permit should be approved because, after all, demolition is a man-made change.

State Floodplain Management Staff is preparing for another one-hour “Lunch and Learn” workshop: *A Guide to Writing Proper Floodplain Development Permits* will take place on January 20, 2022. Keep an eye out for an email announcement with workshop details!!

We hope that this guidance has been helpful. As always, if you have any questions, please do not hesitate to contact State Floodplain staff. All staff contact information is listed on the first page of this *E-Bulletin*.

### **Certified Floodplain Manager's Exam - Reflections from Karen McHugh, CFM**

While proctoring my last paper hard copy CFM Exam on Friday, November 19th, I looked back on the last 14 years, and noted many positive accomplishments in validating Missouri as a leading state in creating highly qualified individuals in floodplain management.

After taking and passing the CFM Exam 12 days after I started working for the State Emergency Management Agency as its Floodplain Manager Officer in October, 2007, I was handed an old 100-question Home Study Course Final Examination, and told that I would instruct the *NFIP Training Workshop*, proctor the CFM Exam from that day forward. After correcting some pretty crazy grammatical mistakes, and removing all the true/false questions exam, I continued to use this same practice exam while instructing the workshop. I always gave lots of verbal tips to workshop attendees, and as a result, Missouri had a respectable CFM Exam pass rate.

I began my journey in teaching the CFM Pre-Exam Workshop (that is what it was called then) and proctoring the CFM Exam in March of 2008. Over the subsequent years, I conservatively estimate that I have proctored the CFM Exam and presented the 4-hour workshop nearly 50 times to at least 200 people. I am grateful that my boss (also a CFM!) encouraged other SEMA Staff employees to become Certified Floodplain Managers: I have also proctored the CFM Exam to 9 SEMA employees, all of whom passed the exam!

But, as they say, it takes a village...State Floodplain Management staff made a priority of mailing out hard copies of FEMA's *A Study Guide and Desk Reference for Local Officials* (FEMA 480) and emailing a link to the ASFPM Exam Preparation Guide. We heavily advertised the CFM Exam in all of our floodplain newsletters, in our yearly NFIP training brochure, and on our SEMA floodplain website. The SEMA Floodplain Management staff has worked tirelessly to get as many Missourians certified as possible, and made it a priority to get a letter of congratulations and a CFM pin mailed to new CFMs as soon as the information hits the floods.org website.

I always felt that proctoring the CFM exam and instructing the workshop was a great way to connect with Missouri Floodplain Administrators, Engineers, etc. on a small, yet very significant-scale. This certification program lays the foundation for ensuring that highly qualified individuals are available to meet the challenge of breaking the damage/rebuild cycle on the nation's human, financial and natural resources.

I want you to know that I have enjoyed every minute of proctoring the CFM Exam. CONGRATULATIONS to all who have earned and maintained their CFM designation thus proving professional competence in floodplain management. Missouri has over 183 Certified Floodplain Managers, several of whom have been CFMs since the program was established in 1998. That's an amazing record!

For information about the CFM Certification Program, follow this link:

[www.floods.org/certification-program-cfm/what-is-the-cfm-certification-program/](http://www.floods.org/certification-program-cfm/what-is-the-cfm-certification-program/)



Missouri Floodplain Management Section  
PO Box 116  
Jefferson City, Missouri 65102  
Phone: 573-526-9129

Social Media:



#### Mission Statement of the Floodplain Management Section:

The mission of Missouri's comprehensive floodplain management program is to make the State and its citizens less vulnerable to the impact of flooding through the effective administration of statewide floodplain management and to provide local communities with the tools and resources for managing, assessing, and planning for development in floodprone areas; to save lives; and to protect property.

#### Other NFIP Contact Information:

Ally Bishop, Region VII Regional Manager

Phone: 913-837-5220

ally.bishop@associates.fema.dhs.gov

Christopher (Chris) Parsons, NFIP Insurance Specialist

Phone: 816-283-7980

christopher.parsons@fema.dhs.gov

Todd Tucker, Natural Hazards Program Specialist

Phone: 816-283-7528

todd.tucker@fema.dhs.gov

## 2022 ASFPM Conference

The Association of State Floodplain Managers will convene the world's largest and most comprehensive floodplain management conference – its 46th annual gathering, May 15-19, 2022 in Orlando, Florida. ASFPM invites you to share your experiences with local, state, regional, tribal and federal officials, industry leaders, consultants and a wide variety of subject matter experts from diverse fields.

The conference is conducted by the ASFPM, the world's leading voice for sound floodplain management, with 18,000+ practitioners, 10,000 Certified Floodplain Managers, 36 chapters and 73 corporate and agency Partners world-wide.



**May 15-19, 2022 | Caribe Royale Orlando | Orlando, Florida**  
**To find out more about the annual ASFPM Conference, please visit:**

**<https://www.floods.org/conference/>**